

Application Serial
No. 09/971,830

REMARKS

In section 2 of the Office Action, the Examiner rejected claims 14-19, 21-26, and 28-33 under 35 U.S.C. §103(a) as being unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent.

The Woehrle patent discloses a racket 1 having a handle forming a grip 2 and defining a longitudinal axis 12. The racket 1 has a fork 17 that carries a head 3 supporting a net 5 woven of longitudinal strings 6 and transverse strings 7. The head 3 has an arcuate crown 19 and an identically arcuate throat 4 so that the longitudinal strings 6 are of the same length throughout a sweet spot 16. The head 3 has, except where it is joined to the handle 17, an oval external periphery formed with an outwardly open groove 9 and with throughgoing holes 20 provided with identical liner grommets 8 through which the strings 6 and 7 pass. The strings 6 and 7 are formed by only one or two filaments which have bights in the grooves 9 between the holes 20.

Side central regions 10 and 11 of the head 3 are formed differently from the remaining portions of the head 3. The side central regions 10 and 11 have flat inner faces 13 and 14 extending parallel to the axis 12,

Application Serial
No. 09/971,830

and the groove 9 has on each of the side central regions 10 and 11 a flat and straight floor 15 extending parallel to the axis 12. Thus, the holes 20 are of identical length at the side central regions 10 and 11, and the transverse strings 7 are also of identical length in the sweet spot 16. The inwardly projecting and straight ridge 18 compensates for the material lost because of the groove 9, which is fairly deep at the center of each of the side central regions 10 and 11. As a result, the side central regions 10 and 11 are of virtually perfectly uniform stiffness and elasticity.

Since the strings 6 and 7 are all of the same length in the sweet spot 16, they will vibrate at the same frequency. Therefore, the strings 6 and 7 act together to increase rebound.

The Melby patent discloses a racket frame 12 having longitudinal strings 2 and transverse strings 3 derived from closed loop strings. The closed loop strings are endless rings which are fastened to adjustable mounting studs 4 having a threaded stud 10 and hooks 11. During stringing, a closed loop string is mounted over the hooks 11, the threaded stud 10 is inserted in a frame hole 13 of the frame 12, and a threaded nut 6 is screwed onto the threaded stud 10.

Application Serial
No. 09/971,830

This procedure is repeated for mounting the opposite end of the same closed loop string on the hooks 11 of a threaded stud 10 located on the opposite side of the frame 12, or the opposite end of the closed loop string may be mounted on the hooks 11 attached to a non-adjustable stud rigidly mounted to the frame 12. Adjustment of string tautness is made by screwing the nut 6 on the threaded stud 10. An open throat 8 of the frame 12 allows for tightening of closed loop strings.

The Coupar patent discloses a racquet 10 having a frame 11 with an inside 12, an outside 13, and a handle 14. The frame 11 has straight upper and lower members 1 and 2 and straight side members 3 and 4. The frame 11 accordingly has a rectangular or square shape. Corners 7 can either be flat or rounded. The frame 11 has a channel 15 in each of the side members 3 and 4 and the upper member 1. Because of the rectangular frame shape, the main strings 5 are of equal length and the cross strings 6 are of equal length. If a square frame is used, then all strings are of equal length and have the same tension, thus providing a larger sweet spot.

The channel 15 has a pair of ridges 16 and 17 which retain a knot retaining plate 19 that maintains the

Application Serial
No. 09/971,830

required tension on a string 20 by preventing a knot 21 from being pulled through an aperture 22 of the frame 11.

Independent claim 14 is directed to a racket comprising a frame, a head, a plurality transversal strings, and a plurality of longitudinal strings. The frame has a handle defining a longitudinal axis. The head connects to the handle and defines a racket face. The head has parallel first and second transversal sides and parallel first and second longitudinal sides, and the first and second transversal sides and the first and second longitudinal sides are firmly connected together at their ends such that each of the sides is substantially inflexible in relation to the other sides. The transversal strings extend between the first and second longitudinal sides and substantially cover the racket face, the transversal strings are of substantially identical length, the transversal strings run essentially parallel to each other, the transversal strings are generally perpendicular to the longitudinal axis, and at least three of the transversal strings are strung from a first single string. The longitudinal strings extend between the first and second transversal sides and substantially covering the racket face, the longitudinal strings are of substantially identical length, the

Application Serial
No. 09/971,830

longitudinal strings run essentially parallel to each other, the longitudinal strings are generally parallel to the longitudinal axis, and at least three of the longitudinal strings are strung from a second single string.

The Examiner points to column 1, lines 32-62 of the Woehrle patent which disclose (i) that the head of a racket can be provided with a reverse crowned throat with a curvature identical to the crown of the head so that the longitudinal strings in the sweet spot are all of the same length, (ii) that no practical way has been found to make the cross strings in the sweet spot also of equal length, (iii) that the cross strings in the sweet spot can be made of equal length by providing the head with straight sides between the crown and the throat, (iv) that such a construction has two main disadvantages of making the racket look so nonstandard as to be unmarketable and of weakening the racket, (v) that even if a square-sided racket could be made to look good enough to be marketable, it would have to be so robustly constructed that the increased weight would make the racket unusable, and (vi) that, if the racket is not robust, the bending of the sides during ball strike would result in a non-uniform response.

Application Serial
No. 09/971,830

In other words, the Woehrle patent instructs those skilled in the art to not use a rectangular or square head for a sports racket. Instead, the Woehrle patent discloses a curved head 3 wherein inside portions 10 and 11 of the sides of the head 3 are flattened and are specially constructed as shown in Figures 3 and 4 so the head 3 has uniform stiffness and elasticity.

The Examiner states that the Melby patent and the Coupar patent disclose that rectangular heads can handle the attendant string tensions. However, the portion of the Woehrle patent cited by the Examiner contradicts the Examiner's statement. This portion of the Woehrle patent, in effect, instructs those skilled in the art to not use the heads disclosed in the Melby and Coupar patents.

Accordingly, the Woehrle patent teaches that the rackets disclosed in the earlier Melby and Coupar patent are undesirable. For this reason, it would not have been obvious to one of ordinary skill in the art to combine the Woehrle patent with the Melby and Coupar patents. Because it would not have been obvious to one of ordinary skill in the art to combine the Woehrle patent with the Melby and Coupar patents, the rejection of independent claim 14 must fail.

Application Serial
No. 09/971,830

Therefore, independent claim 14 is not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent.

Because independent claim 14 is not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent, dependent claims 15-19 are not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent.

Independent claim 21 is directed to a racket comprising a frame, a head, a plurality of transversal strings, and a plurality of longitudinal strings. The frame has a handle defining a longitudinal axis. The head is connected to the handle and defining a racket face, the head has parallel first and second transversal sides and parallel first and second longitudinal sides, and the first and second transversal sides and the first and second longitudinal sides are firmly connected together at their ends such that each of the sides is substantially inflexible in relation to the other sides. The plurality of transversal strings extend between the first and second longitudinal sides and substantially covering the racket face, the transversal strings are of substantially identical length, the transversal strings

Application Serial
No. 09/971,830

run essentially parallel to each other, and the transversal strings are generally perpendicular to the longitudinal axis. The plurality of longitudinal strings extend between the first and second transversal sides and substantially covering the racket face, the longitudinal strings are of substantially identical length, the longitudinal strings run essentially parallel to each other, the longitudinal strings are generally parallel to the longitudinal axis, and at least three of the longitudinal strings and at least three of the transversal strings are strung from a single string.

As discussed above, the Woehrle patent, in effect, instructs those skilled in the art to not use the heads disclosed in the Melby and Coupar patents. Accordingly, it would not have been obvious to one of ordinary skill in the art to combine the Woehrle patent with the Melby and Coupar patents. Because it would not have been obvious to one of ordinary skill in the art to combine the Woehrle patent with the Melby and Coupar patents, the rejection of independent claim 21 must fail.

Therefore, independent claim 21 is not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent.

Application Serial
No. 09/971,830

Because independent claim 21 is not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent, dependent claims 22-26 are not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent.

Independent claim 28 is directed to a racket comprising a frame, a head, a plurality of transversal strings, and a plurality of longitudinal strings. The frame has a handle defining a longitudinal axis. The head is connected to the handle, the head has parallel first and second transversal sides and parallel first and second longitudinal sides, and the first and second transversal sides and the first and second longitudinal sides has holes therethrough and are firmly connected together at their ends such that each of the sides is substantially inflexible in relation to the other sides. The plurality of transversal strings are strung through the holes in the first and second longitudinal sides, the transversal strings are of substantially identical length, the transversal strings run essentially parallel to each other, and the transversal strings are generally perpendicular to the longitudinal axis. The plurality of longitudinal strings are strung through the holes in the

Application Serial
No. 09/971,830

first and second transversal sides, the longitudinal strings are of substantially identical length, the longitudinal strings run essentially parallel to each other, the longitudinal strings are generally parallel to the longitudinal axis, and the transversal and longitudinal strings are secured to the frame by at least one knot.

As discussed above, the Woehrle patent, in effect, instructs those skilled in the art to not use the heads disclosed in the Melby and Coupar patents. Accordingly, it would not have been obvious to one of ordinary skill in the art to combine the Woehrle patent with the Melby and Coupar patents. Because it would not have been obvious to one of ordinary skill in the art to combine the Woehrle patent with the Melby and Coupar patents, the rejection of independent claim 28 must fail.

Therefore, independent claim 28 is not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent.

Because independent claim 28 is not unpatentable over the Woehrle patent in view of the Melby patent and further in view of the Coupar patent, dependent claims 29-33 are not unpatentable over the

Application Serial
No. 09/971,830

Woehrle patent in view of the Melby patent and further in
view of the Coupar patent.

Application Serial
No. 09/971,830

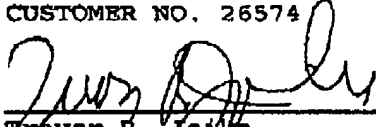
CONCLUSION

In view of the above, allowance of these claims
and issuance of the present application are respectfully
requested.

Respectfully submitted,

Schiff Hardin LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
(312) 258-5500
CUSTOMER NO. 26574

By:


Trevor B. Joyce
Reg. No: 25,542

August 15, 2005